OCTOBER
1955

# THE Gleaner

NATIONAL AGRICULTURAL COLLEGE

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# Gleaner

NATIONAL AGRICULTURAL COLLEGE

Farm School, Bucks County, Pennsylvania

VOL. L OCTOBER, 1955 NO. 1

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ON THE COVER: Mr. Joshua Feldstein, an instructor at the College, is using a Bouyoucos Moisture Meter in the College experimental orchards. This meter determines the available percentage moisture in the A, B, and C horizons of the soil profile. *Photo by Paul Lepard.*

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The Gleaner is published throughout the school year by the student body of the National Agricultural College. Entered as second class matter at the Post Office at Farm School, Pa. Subscription rate—$1.50 per year.

# . . . . Editorial Comments . . . .

## THE U. S. DEPARTMENT OF AGRICULTURE . . . AND YOU

TOO OFTEN, when a farmer's income does not quite equal his outgo, derisive—often slanderous remarks are heard concerning the United States Department of Agriculture.

However important price controls are, they are not the Department's most effective nor most important service. For years before price controls were set into our economic system, the U.S.D.A. had been engaged in experimental work, directed primarily at increasing yields, and secondarily at creating new markets for surplus farm products. This excellent and very important work is still going on at four great Regional Research Laboratories, and in long range field trials centered around work done at the Department's research farm at Beltsville, Maryland.

With the development of new markets for excessive produce, the U.S.D.A. directs its aid to the cause of a flooded market, rather than its effects.

By helping to stabilize the farm markets, the Department is helping to stabilize our entire economic system. Thus, in addition to supplying our own nation with more food than it can use, our nation is helping with shipments to less fortunate nations of foods and feeds at reduced prices or for token payments.

While these are the most impressive objectives and goals, this, one of the largest of the Government Bureaus provides numerous other services for people not only of the United States, but of most of the World.

Pamphlets telling how to plant Daisies or get rid of them; how to build chicken coops or tear them down, and literally thousands of other subjects are available from the Department. Once a year a book is published covering a particular phase of Agriculture, completely and exclusively. Subjects vary from Animal Diseases to Marketing Practices, from plant breeding to conservation.

Don't condemn the U.S.D.A. merely for doing the job we condemned it for not doing in 1930.

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## THE STUDENT COUNCIL PROGRAM FOR 1955

IN A SMALL college such as N.A.C., the Student Council is the most important organization on campus. It is the only group that will be recognized by the administration as a representation of the student body concerning student problems.

The Student Council is made up of members of each of the classes—one freshmen, two sophomores, three juniors, and four seniors are elected to Student Council annually with the presidents of all classes adding to the membership.

Aside from representing the other campus clubs and the students, the council acts as sponsor for many important phases of our college life. Last year, the Student Council was probably our most active organization. They sponsored and organized the first annual college weekend, induced the administration to reduce the parking lot fee, took full responsibility for probation students, sponsored the student canteen, were in charge of the student recreational facilities and presided at Student Court meetings, — this in addition to acting as liaison between the student body and the administration.

This year the Student Council intends to carry out all the programs and to initiate new and beneficial phases of their program.

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# GRIDIRON OUTLOOK FOR '55

By Walt Kendzierski '57

AS WE again pass through the stately columns opening the portals of the National Agricultural College, we return to college life for another year. And outstanding among campus activities is football. At N.A.C. football takes its part as the major topic of discussion from nightly bull-sessions to faculty meetings. And why not, for 1954 was the "Aggies" big football year. But what awaits the newly born season?

For the third year Thompson and Co. will take over the duties to put the "Aggies" on the road to another victorious season. After compiling a 5-2-1 log last year, with a stronger and heavier squad, no doubt Coach Keys' eleven will accomplish greater fame.

Graduation's toll being slight, the line is virtually intact with the exception of Harry Conover and Jay Weigman, two top-notch ends, and Stu Berkis, the only back.

Last year's victorious season was the first in the history of the college, with such impressive victories as a 34 to 0 rampage over Brooklyn College, a traditional 15-0 victory over Susquehanna University, a 13 to 0 win over Gallaudet, and a 19 to 18 upset over Montclair S.T.C. The Green and Gold had only a mere 70 points scored against them while they themselves collected 114 counters.

This year's schedule is almost the same as last year's except for the replacement of New Britian S.T.C. by Wilson S.T.C.; thus the "Aggies" outlook is sure to be a bright one for 1955.

But as you know, football is not just a game of sheer power. It's the man behind the team who determines its rise or downfall. Our genial mentor, Charlie Keys, has proven that he has the knowhow to guide our Saturday Heroes on the path of victory. After only a few short years of building, Coach Keys has found the combination to a winning team. With the assistance of his able line coach, John Guisti, N.A.C. will continue to keep the ball rolling.

The outstanding player on the N.A.C. team is Captain Willis "Skip" Thompson, the acrobatic quarterback who refused to stay tied up no matter what defensive measures the oppostion dreamed up to stop him.

In all eight of the "Aggies" games, "Skip" Thompson was dependable. Though he's not a big fellow by comparison with the "monsters" who play college ball, he can equal any of them.

**Captain Willis "Skip" Thompson will be calling the plays for the Aggies this year.**

Thompson, a Junior, was N.A.C.'s leading scorer with 45 points. He also had numerous touchdown passes to his credit and three point-after-touchdown boots, which proved his brilliant all around ability.

With his uncanny knack of coming up with the right maneuver, practically 100 per cent of the time, "Skip" thrilled spectators throughout the season.

Thompson's most effective play was the option, in which he started out toward the end. If the end came through to tackle him, he'd wait until the last minute, then flip to a halfback, who would stampede around the end. If the end played the move in the middle he'd fake the toss and cut off tackle himself. "Skip" is a fast runner, tough, quick, and slippery.

Unfortunately, Bill Miller, who was elected co-captain by his teammates, will not be back this fall due to illness in his family. Miller, a 195 pound guard from Trenton, N.J., entered N.A.C. as a freshmen in 1952, and by the fall of the same year, he was on the varsity team. In 1953 he played offensive guard and defensive line-backer. Last fall, he developed into one of the most tremendous performers in the attack and on the defense that the "Aggies" have ever seen. "De Mill" was extremely fast, a good pursuer on the defense, and a tough blocker on the line or down field. He played hard and gave his all, down to the final whistle.

Senior Ronnie Stammel is back at the halfback position after an injury that occured in a pre-season scrimmage last season. He was elected co-captain by his teammates for the 1954 season, after having received the "Back of the Year" Trophy and top scoring honors in 1953. Upper classmen may remember several of his long touchdown jaunts and brilliant left handed passing plays. Ronnie's a good open-field runner, who takes advantage of his blocks and uses clever faking. He is regarded as a good defensive back and a top-grade pass receiver.

Jack Holzapfel, a junior, has two varsity seasons under his belt. He stands 5 feet 10 inches, and weighs 165 pounds. He is known for his hard and tricky field running and uncanny ability to shake off would be tacklers. He is equally adept on offense and defense, being a leading pass receiver and point getter.

Holzapfel's chief assets are speed and shiftiness, particularly at the take off. He drives hard and is able to cut, making the best of his blocking in the open. Jack will be recognized by his large number thirty-three.

Jack suffered a leg injury at mid-season that was quite a handicap to N.A.C., but he will be in fine shape for the 1955 gridiron campaign.

As a freshman, Bernie Bunn earned a starting guard position by replacing injured Ned Worstal. He proved himself so well that he became a full time player, seeing unlimited action. Bernie tips the scale at 205 pounds. He is a huge lineman with lightning reflexes and is almost immovable on the line. Because he is exceptionally powerful and fast on his feet, he can knife, drift, or back up the line. Offensively, he is quick and effective in pulling out of the line and in delivering damaging blocks. Bernie can be remembered by his stolen ball antics last year.

As a freshman, Bill Scott was the only member of his class to win three varsity letters. "Scotty" got his start after halfback Ronnie Stammel was injured during a pre-season scrimmage.

# HONOR AGGIES

RONALD STAMMEL, a senior from Harrisburg, is one of the few students who can have his hands in just about every organization on campus, and do each job expertly.

This year, Ronnie will be the fellow with the gavel in his hand leading every Student Council meeting. Besides this presidency, Ronnie is also president of the Varsity Club, co-captain of the baseball team, and a member of the yearbook staff. Last year, Ronnie was co-captain of the football team, and for two years presided as president of his class. In 1953, Ronnie received the "Back of the Year" trophy at the annual Football Banquet. Along with these activities, Ronnie is a member of the basketball team, and contributes his time to the Glee Club, Band, Dairy Club, and Gleaner staff, as associate editor.

In 1950, Ronnie graduated from Lower Paxton High School. During high school, Ronnie was president of his class for three years. As a senior, he was president of the Student Council, and Business Manager of the yearbook.

Following graduation, Ronnie attended Pennsylvania State University for one year, and then transferred to N. A. C. After attending a large university and a small college, Ronnie feels that a small college has many definite advantages *over* a large one.

At home in Harrisburg, Ronnie is active in the Colonial Park Reformed Church, and is treasurer of the Lower Paxton Athletic Association. During the summer months, Ronnie plays baseball for the Citizens Trust Company of Harrisburg.

Ronnie will graduate in May, and then plans to farm in Linglestown, Pa. As he has already shown his ability at N.A.C., we know that farming will be a successful undertaking.

Co-editor of the Cornucopia this year, Eugene "Bronc" Sanders shares Aggie Honors this month. Bronc's home town, Bowmansville, Pa., lies in Carbon County, which is bordered on the north by Pennsylvania's largest anthracite coal fields and on the south by Lehigh County, the state's leading potato producer.

Besides co-editorship of the yearbook, other responsibilities Bronc will hold this year are treasurer of the Glee Club, member of the Gleaner Staff, Vice-President of the Food Industry club, Vice-President of his class, and treasurer of the "A" Day Committee.

In previous years, Bronc participated in intramural sports, Varsity Club, and dance chairman of the Junior Class Dance.

Memories that will always remain with him about N.A.C. are the freshman hazing session, their undefeated tug-o-war team, the night of Hurricane "Hazel," and the first basketball game with Ursinus College.

During his first three years at N.A.C., Bronc believes that he benefited most from the close relationship between the student and the faculty. "I think that it helps the student to learn more in the classroom by being able to ask questions and hold discussions. Another aid to the students' education at N.A.C., is the library which holds the greatest collection of material dealing with agriculture I have ever seen."

Bronc's favorite hobby is wood working, and he also enjoys going to the movies, rooting for the Milwaukee Braves, and square dancing. His favorite sports are motor boating, water skiing, swimming, and baseball.

After graduation, Bronc may go to graduate school, "but I will probably serve a stint in the armed forces." He would like to be employed in the Dairy industry as a draftsman or dairy plant lay out designer.

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# SPORTSLITES

## BY STAMMEL

WELL, FANS, it's that time of the year again and once more the sound of cleats can be heard through the halls of Ulman Hall as the 1955 edition of the National Aggies is readying themselves for the on-coming season. For those of you who don't know what goes into a pre-school practice, I would like to relate the happenings of a typical practice day.

At 6:45 A.M., everyone is rudely awakened by Captain "Skip" Thompson and Coach Keys, and by seven o'clock, everyone is on the field dressed in shorts for calisthenics, and a one mile run, after which everyone showers and heads for breakfast.

At 9:30 A.M., morning practice begins, and runs until about 11:30 A.M. The team is now in full equipment, and the entire workout is usually spent on fundamentals. In the afternoon, practice is from 2:30 until 4:30 and the team is usually all together to run plays and scrimmage. With the end of practice, the day is not over, however, for at 7:00 P.M., blackboard practice is held for about an hour. Here, plays are explained to the team. So, as you can see, many long hours are spent in preparing for football season and we know that the work will be worthwhile if we have a winning team. Every student can help by giving the team the same fine support it received last year.

There has been a good turnout for the team this season, with most of the lettermen returning. Among the returnees are ends Ray Bobowski, Bill Long, Glen Wrigley, and Duane Bair; tackles are Bob Fenyves, lineman of the year in 1954, and Wayne Hoffner; guards Don Richardson and Bernie Bunn, who will be remembered for stealing the ball and going seventy-five yards for a T.D. against Montclair last year; centers, Joe Overdevest and Don Grim; backs, captain "Skip" Thompson, Back of the Year for 1954, Tom McMinn, Larry Widdoss, Bill Scott, Sid Blair, Ron Stammel and Jack Holzapfel. Yet to be heard from are tackles Walt West and Bill Plenge.

Another welcome to the squad is Paul Checkel, who played guard beside Coach Guisti in '49 and '50. Paul has returned to N.A.C. after four years in the Air Forces and is proving his worth as a hard running fullback. He will be a junior this term.

It's time to close the locker room door until next issue and remember:

When the final gun has sounded,
And the scorer scores the game,
It's not who won or lost that counts,
It's how you played the game.

# BUMPER CROP - - - 5000 B. C.

## Man's First Cultivated Crop Remains An Important Element In Nutrition

*By* Byron W. Fraser, *Professor of Food Bacteriology*

CHICK PEAS first interested me when, in the course of learning something about "Chorizos" (Spanish sausage), I heard the expression "chorizos con garbanzos" and "garbanzos con huevos." Upon inquiry I learned that garbanzos were chick peas, and that Spanish speaking people eat them at just about every opportunity.

Recently I have learned a little more about these unusual looking seeds and am passing the information on—maybe you can add something more.

Chick peas were a cultivated crop before people knew how to write. They are thought to have been grown by pre-historic people in the area now known as Iran or Persia. Today they are not found in the wild state which means that if our aboriginal ancestors had not domesticated the plant it would be just another extinct species known only to the student of fossilized plants and animals. Today they are a crop largely confined to semi-tropical and warm-temperate regions of the world.

The Latin name for the pulses or legumes in *Cicer* and the high regard in which they were held is reflected in the ancients adopting the names for their families. Cicero, the famous Roman orator and real estate owner, may have wondered why his forebears had ever adopted such an undignified name! But there were others as well known—*Piso, Lentulus, Tubero*. The species name *arietinum* refers to the appearance of the seed which resembles, in profile, a small rams head—*Aries*.

The name "Chick Pea" may be a corruption of the French Chiche pois, or Pois chiche, whose modern translation to English is chick pea or dwarf pea. The word "chiche" has no reference to chicks at all when used in French phrases—it means stingy, scanty, or parsimonious—and could have been an original French reference to the small number of seeds per pod - usually one per pod as compared to the other pulses or legumes.

The German "Kichererbse" may be a Germanization of the Latin *Cicer*, "erbse" meaning peas.

The Spanish and Portugese are very fond of the chick pea and their name for it is "Garbanzos." In Italian it is "Ceci." The British know the legume as Egyptian peas, or, when grown in India, they are called "Bengal gram." The people of India refer to them in Hindi as "Chana" while the classic language of Sanskrit has the word "Chenata." The French writer DeCandolle in 1855 stated that the origin of the chick pea was in the area south of the Caspian Sea, and Narayana in the *Journal of the Indian Institute of Science* says that it was "early introduced into India and later into the Mediterranean countries." It was grown in the days of the ancient Greek heroes, about 800 B.C. and was referred to as "erebenthos." From Spain it immigrated to the New World and is cultivated in Mexico and other Latin-American countries.

Mexico raises about 110 million pounds of the peas per year, which is only about 5 pounds per capita. Turkey grows about 10 pounds per capita, or 180 million pounds; Spain about 13 pounds per person or 434 million pounds; Pakistan 14 pounds per capita, or 1000 million pounds; while India raises 22 pounds per person, or 7000 million pounds per year. Only 4.4 million pounds are raised in the United States.

As can be seen from these approximate figures the chick pea is not a central part of the diet of any of these nationalities, but the persistence with which it is grown and eaten speaks well for the respect accorded it. In this country there are several canning companies which use the imported, dry seed to be soaked and canned in light brine for sale to the "American-Latin" trade. The dried seed is available in the larger markets handling imported beans and other dried foods. In talking to people from South America or from the Middle East, I was impressed with the sincerity or earnestness with which they discussed garbanzos - or "Humas" (modern Arabic or Hebrew for chick peas.)

It is not surprising to find that such an ancient vegetable enters into the celebrations of at least two religions. The Hindus use Bengal gram (chick peas) as part of a ceremony of confirmation of boys at the age of about 7 years, in which the priest toasts some of the seeds on a griddle and gives some to each child to eat. The Jewish people have a custom of eating "Nahit"—(chick peas—older Hebrew or Yiddish) as part of the

# BUMPER CROP -- 5000 B. C.

*(continued from preceding page)*

celebration of the first born child of a couple being a boy. Apparently if the second child is a boy this ritual is not followed - what the significance is, no one I have talked to seems to know! Why either of these two old cultures should regard chick peas as something special is buried in ancient ideas that someone may find recorded somewhere. Why these two separate people should have a ceremony including chick peas may be merely a coincidence.

There are several varieties of the legume chiefly differentiated by the color and size of the seed. In India a "green gram" is made into a flour or meal and baked in cakes. The white, buff, or common variety is also used in the same way and as a base for curries, as a batter for covering slices of vegetables. Whole peas, fresh or dried, are boiled alone or with other vegetables. The Latin nationalities eat garbanzos with meats or eggs - usually fried, or in stews and soups or mashed as we use potatoes. According to Winton's *"Structure and Composition of Foods"* there are several varieties of *Cicer* known as the small brown Indian variety, small red-brown German, small yellow Russian, and large yellow Spanish. The number of ways of preparing them for the table depends on the food habits of the people, which would make a cookbook devoted to recipes using chick peas in various ways.

There is some research going on concerning the diseases of the *Cicer* genus of legumes in each of the countries where they are popular. Some has to do with the disinfection of seed against fungus spores; others on the nature of the protein and the cytology of the seed tissue. Unfortunately, most of this work is not to be found, other than references, in most libraries. However, Winton reports some analyses performed by Italian, Indian and Russian chemists and the following might be considered typical:

| | *Protein* | *Fat* | *Nitrogen Free Extract* |
|---|---|---|---|
| Chick peas ..... | 22.6% | 5.0 | 56.1 |
| Peas, mature (Sherman).... | 23.8 | 1.4 | 60.2 |
| Soybeans, mature (Sherman).... | 34.9 | 18.1 | (Carbohydrate)<br>34.8 |
| | | | (Carbohydrate) |
| | *Starch* | *Fiber* | *Ash* |
| Chick peas ..... | 49.3 | 3.0 | 2.9 |

The peas and soybeans are shown for comparison to illustrate similarities and differences in the three. Using the "More Specific Factors" for converting percent to calories per 100 grams we can compare the three on that basis. We find that there is an interesting discrepancy in calculating the calories available in soybeans from the analysis:

| | | | | |
|---|---|---|---|---|
| Chick peas | 22.6% | prot. | x 3.47 = | 78.5 |
| | 5.0 | fat | x 8.37 = | 41.8 |
| | 56.1 | carb. | x 4.07 = | 228.0 |
| | | | | 348.3<br>calories/100 gm. |
| Green peas | 23.8 | | x 3.47 = | 82.5 |
| mature dry | 1.4 | | x 8.37 = | 11.7 |
| | 60.2 | | x 4.07 = | 245.0 |
| | | | | 339.2<br>calories/100 gm. |
| Soybeans | 34.9 | | x 3.47 = | 121.0 |
| mature dry | 18.1 | | x 8.37 = | 151.0 |
| | 34.8 | | x 4.07 = | 144.0 |
| | | | | 416.0<br>calories/100 gm. |

The peas and soybean analysis are from Table 65, pages 678 and 679 of Sherman's*"Chemistry of Food and Nutrition."* The calorie value of the peas agree well with the text but the soybean calories in this textbook are given as 331 per 100 gm. If the soy bean protein and fat calories are subtracted from 331 and the remainder divided by the % "carbohydrate" of the soybeans, a factor of 1.7 is found. The same or similar factor is given in treating the date on soybean flour, medium fat or full fat in the same way. The usual factor for conversion of weight of carbohydrate per 100 gm. to calories, 4.07, results in high values. The error lies in the fact that soybean carbohydrate is only about 40% available to humans. They contain about 5% each sucrose, stachyose, araban, and galactan, and probably only the sucrose is assimilable. Most soybean varieties contain no starch.

In any case the chick pea compares favorably with green peas or soybeans on a calorie basis. The protein of soybeans is known to maintain nitrogen balance if fed in sufficient amount. Peas will maintain rats in certain conditions. The chick pea is being studied today in foreign laboratories for its nutritional qualities but at present only older data is available for comparison. Some of this data on amino acids show nothing outstanding for the chick pea:

| | *(Sherman)* *Soy flour* | *(Winton)* *Soy flour* | *(Narayana)* *Chick pea* |
|---|---|---|---|
| Arginine | 7.79 | 15.5 | 12.09 |
| Histidine | 2.38 | 2.6 | 0.99 |
| Cystine | ---- | 1.5 | 0.88 |
| Lysine | 7.16 | 7.02 | 7.57 |
| Trypotophane | 1.12 | ---- | 0.41 |

However, Blumenthal, in his book *"Food Products"* says that the chick pea is one of the "few highly nourishing legumes and vegetables"; and though high in phosphorus it is regarded as being non-acid forming, probably due to high magnesium content.

On the basis of yield per acre, chick peas are not a standout either. Using the production figures and acreage of food products throughout the world, published by the U.S.D.A., it appears that the smallest producer, the U. S., obtains as good or better yields than most countries—about 580 pounds of chicks peas per acre, or about 116 pounds of protein. The soybean is grown at the rate of about 1200 pounds per acre which, multiplied by the percent protein given 420 pounds per acre.

In some countries the chick pea is grown as a major crop but in others, as in India, it is grown as a second crop of the year. In this role, with proper nodule bacteria, it will fix soil nitrogen (as do soybeans) and enrich the soil for the cereal crops.

In our search for better and more efficient foods, the dietary of all people are under study. Vegetarianism seems to occur among large groups by force of economic circumstance—regardless of religious dogma. This has made vegetarianism a practical matter by eliminating the intermediary meat animal and obtaining food—especially protein, more directly from the soil. Since this situation is likely to grow more acute rather than less, the study of the chick pea—its nutritive quality, improvement of growth and yield is a worthwhile project here in the United States as well as in those countries where it is grown and respected.

Much of the information reported here was obtained right on the campus from representatives of those areas of the world where the chick pea is raised extensively.

As a forage crop the plant may have little future—the leaves and stems have a high oxalic acid content. Some feeding tests indicate a deficiency of an essential amino acid in the dry seeds. "Complete" vegetable protein crops for people are a growing need in the world—it will be up to the farmer and the chemist to provide them.

# PLANT CURIOSITIES

## EXOTIC AROIDS FOR THE HOME

By Thomas Hofmann '56

DUE TO THE changing styles in architecture and furnishings of the home, the use of exotic plants is becoming more popular every year. Because of this, and the introduction of new species, society is becoming more familiar with tropical ornamental foliage plants. Every type of home, rambling ranch type to old colonial can use these plants to advantage in hiding bad points, or in enhancing their innate beauty. They need not be grown in pots, but may be set in an inside garden well, at the base of your picture window, in a hanging basket, terrariums, bookends, window boxes, and countless other places. It is interesting to note that in South America and the southern part of the United States, some of these plant curiosities, are used as ornamental landscaping plants.

One of the problems of growing attractive plants at the sea-shore may be solved by the use of the Southern Brazilian plant, *Philodendron bipinnatifolium*, which grows along the seacoast of Brazil. This Philodendron is highly desirable for patio or porch use, since it requires less protection than most of the other members of the Araceae family. Because of the very tropical design of the *Philodendron bipinnatifolium*, it fits in well with furnishings of a large beach home. The large leaves are pale and leathery with graceful lobes and very prominent veins.

The genus name, "Philodendron", comes from a Greek compound of words—"Philo" meaning "love" and "Dendron" meaning "tree". Some of these plants are climbers, while others are sessile in habit, or self heading. The plants are more or less woody when they become old. They bear thick leaves which are entire, or pinnately cut, with sheating petioles and unisexual flowers, or spathes. These spathes, are white, yellow, and brilliant red, as in the anthuriums, notably the flamingo flower.

One does not commonly see the Philodendron in flower, and is seldom privileged to see its fruit. Philodendron noble, a rosette type, with long leathery leaves, flowers readily. *Philodendron pertusum* may produce fruit easily in its natural habitat—Mexico and Guatamala. The fruit is edible, and tastes somewhat like a pineapple-banana combination. *Philodendron pertusum* will grow in nearly any type of soil, as may be shown by the fact that the roots fill the container in a very short time. It is perhaps one of the best plants for a home or office building where there is likely to be a wide variance in temperature, since nothing other than freezing seems to kill it.

First introduced to the United United States in the Eighteenth Century, about 150 of the 400 known species may be found here. They vary, not only in shape and texture of leaf, but also in color; some being variegated and other reddish. Although some Philodendrons grow in full sunlight, such as *Philodendron cordatum*, most species and varieties prefer relatively strongly filtered or diffused light. Since many species or varieties may grow under several conditions in relation to the amount of light, the same plant may be listed under several of the following conditions;

1. Plant that will stand abuse and adverse conditions — *Philodendron cordatum, Philodendron hastatum, Philodendron imbe* and *Philodendron selloum.*
2. Plants that will withstand low temperatures — *Philendron imbe, Philodendron cordatum, Philodendron selloum* and *Philodendron bipinnatifolium.*
3. Plants that require 50° F., or above —*Philodendron dubium* and *Philodendron hastatum.*
4. Plants that may be grown in full sunlight—*Philodendron cordatum Philodendron selloum,* and *Philodendron wendlandii.*

If you do not know the type of Philodendron you have, there is this rule of thumb—most Philodendrons grow best between temperatures of 55° to 75° F. with high relative humidity. Their soil requirements are easy to remember—keep it light and friable, with a high organic content.

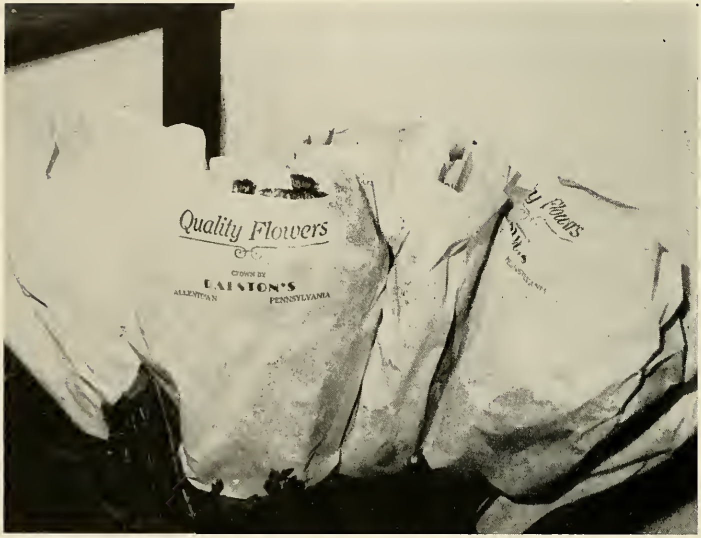
The Philodendron is only one of the many oddly shaped and uniquely

*(continued on page 22)*

**Philodendron Hastatum (left) and Philodendron Cordatum are commonly used in the interior decoration of the modern home or office.**

# PACKAGES WITH A PURPOSE

By Richard Block '56



Chrysanthemums pre-packaged for wholesale distribution.

BASICALLY, the purpose of a packaging material is to bring the product to the consumer as fresh as possible from the producer. For most products, this means merely keeping the item clean and protecting it from breakage, but in dealing with plants, many other considerations are necessary, since plants are living things. In some instances, we wish to promote growth enroute, while in other cases its complete inhibition is desired. Each Horticultural product presents a specific problem to the grower and the retailer.

Desired attributes of a good Horticultural packages are as follows:

(a) eye appeal
(b) inhibition of growth
(c) promotion of growth
(d) protection from breakage and heat
(e) reduction of transpiration rate
(f) elimination of light
(g) ease of handling
(h) low cost

Eye appeal is sales appeal. Since sight is usually the first sense to be engaged in the consumers' choice of goods, it is essential that the product be pleasing to the eye in both form and color. Especially in the ornamental industry, where buyers are purchasing products for their aesthetic value rather than their utilitarian aspects. It is imperitive, then, that the package supplement the beauty of the item offered for sale. The florist realizes this, and chooses his packages for their appeal to the consumer. Foliage plants are often displayed in colorful ceramic containers that frequently suggest the gift occasion by their shape. Examples of such containers are baby bottles and shoes. Bouquets of flowers are delivered in long fiber-board boxes, attractively colored and tied with ribbons to carry out the mood of the occasion. Since the orchid is considered by most consumers, to have no equal for beauty, it may simply be set in transparent containers, which gives the flower an almost gem-like quality. Small vines are sold in lacquered brass or copper containers which contrast richly with the deep green leaves overlapping the edge. Frequently, these containers are mounted in wire racks for wall mounting where the foliage will be best appreciated.

Since presentation is half the sale, it is no wonder that the commercial florist will go to such lengths to display his wares.

In bulbs especially, we do not want any growth occuring before the consumer plants them. For when the hardy bulb sprouts, it requires more delicate care than it would be afforded while being bounced around in florists' bins. Proper moisture conditions may hasten sprouting, but by bagging bulbs in Low-Moisture-Vapor-Transmission films, we can keep the bulbs dry. Polyethylene plastics are often used for this purpose. Rose bushes are often waxed to retard growth before planting.

Promotion of growth is desired in many instances. The salesman wants his potted plants to be the picture of vitality. He desires his foliage to be glistening with the deep colored sheen of life. Several containers on the market have built in nourishment for plants. Upon watering, a quantity of nutrients is liberated for inhibition by the root system. One pot is manure, dried in the shape of a pocket to hold the earth and plant. Another type of paper pot is impregnated with fertilizer. Still another is a terra cotta pot having a rich band of chemical nutrients at soil level.

In some plants we want water retention and prevention of rapid transpiration, so plants won't lose their turgidity. For this purpose, we may wax the leaves of some varieties. A terrarium effect is created when we enclose the plant in a Low-Moisture-Vapor-Transmission films.

To keep plants from breaking enroute, we usually transport them in flats. The ordinary pot prevents damage to the root system in house plants, while balling prevents the same sort of trouble in ornamentals.

High intensities of light and heat are avoided through the use of opaque perforated containers which allow air circulation. Ease of handling is accomplished by burlaping ornamental shrubs. Rose bushes are bagged in laminated metal foils for this purpose, while cacti and succulents are boxed. Cut flowers are shipped in specialized wrappers, which protect both the floral heads and stems.

*(continued on page 17)*

# OUR BUSINESS IS GROWING

By Paul Lepard '57

*Photos by* Gil Finkel '57

L. A. FETZER, of Hartsville, Pa., is one of the finest orchid growers in this area. He has two acres under glass, and specializes in the production of orchids and carnations.

Accompanying this article are six pictures that are found on the following center page spread. Pictorially, they show the complete story of an orchid – from seed to flower.

In figure one, is shown a group of the plants that are used as stud plants. These plants produce the microscopic orchid seed. The balloon-shaped object is the seed pod. It takes approximately one year to produce the orchid seeds.

In figure two, the seeds have been collected, and we see the tiny orchid plants following germination. The plants germinate in this sterile flask. They are grown in a agar-agar medium, with nutrients added. These plants remain in the flask for about one year.

In figure three, the tiny orchid plants are potted in four inch "community pots." There are about twenty-five plants per pot. The plants remain in the community pots for one year.

Figure four shows the individual orchid plant, after it has been removed from the community pot. It is now potted in a three inch pot in osmuda fiber. It is important that this fiber be packed very tight around the roots and edge of the pot. These plants remain in the three inch pot, until, due to growth, they must be re-potted.

In figure five, the plant is almost at maturity. Notice how the foliage is increasing.

In figure six, we see the gem of all the flowers, the beautiful Cattleya orchid. After waiting from seven to ten years, the orchid grower finally receives his first income from the orchid plant.

The orchid belongs to the family *Orchidaceae,* which is world wide in distribution, and contains 300 genera and about 15,000 species. The main greenhouse varieties are the *Cattleya, Cymbidium,* and *Phalaeonopsis.*

The majority of orchids may be divided into two classes—the terrestial and the epiphytic. The former grows in soil composed of organic matter deposits on forrest floors; the latter, on branches of trees in tropic regions, where part of the year is unfavorable to vegetation.

Orchids are propagated by division or seed. Mr. Fetzer practices both of these methods, however, seed propagation is the more popular.

Many times, while re-potting an orchid, breaks occur. These breaks are then placed in a bed of fine stone, and without the addition of nutrients, these breaks produce roots. They are then returned to a pot in an osmunda fiber medium.

The method of orchid seed germination is no mystery. Many times, failure is due to faculty techniques in one or several steps of the procedure. The process is not difficult if adequate equipment and conditions are provided.

Seventy-five per cent of the orchids grown by Mr. Fetzer are *Cattleya* orchids, the flower of which is pictured on the following page. *Phalaeonopsis* and *Cymbidium* orchids account for the remaining twenty-five per cent.

Orchids are attacked by few insect pests, and the most common cause of death is overwatering. During the summer months, orchids are watered approximately three times a week, although the plants are syringed three times a day. A fine water mist is also sprayed on the walks and benches by means of pipes running under each bench. This is also done several times a day.

Since the demand for orchids isn't as high at the present time as it will be during the holiday season, the plants of one orchid house are being "held back". This is accomplished by artificially lengthening the time of day by the use of 60 watt bulbs, that are strung overhead at a distance of eight feet apart. These lights are turned on automatically for several hours during the night.

Another main crop at Fetzer's is carnations. This past year, Mr. Fetzer has had carnations in production the year round. This is accomplished by setting up a pinching schedule, in which one bed is not pinched at all, one bed being pinched once, another bed pinched twice, and so on. In this manner, the bed not pinched at all will be in production in a very short time.

Spraying against insects and disease in the carnation house is done automatically by an overhead pipe line. The most popular spray mixture is Aramite, an insecticide, and Parzate, a fungicide.

**Author Demonstrating "Stroller" Designed By L. A. Fetzer**

Mr. Fetzer has many of the most unique and modern greenhouse methods that can be found anywhere today. One such example is the cutting stroller, that is pictured with this article. The height of this stroller can be adjusted according to the height of the crop being cut. This stroller will hold two cutters. The cutters face in opposite directions, and while one is cutting flowers from the bed on one side of the walk, the other cutter is cutting another bed. This cutting stroller, which is one of Mr. Fetzer's own inventions is motivated by the two cutters who move their hips in such a motion that the stroller moves down the aisle very easily. It is built so that the wheels only move in one direction.

A modern method of irrigation is

*(continued on page 16)*

# ORCHIDS~A SEVENTE

Stud Plant Showing Seed Pod

After Germination Orchi

Individual Plant in Three Inch Pot

Orchid Pla

# YEAR FLORAL CROP

Are Growing in a Flask

Plants Living in Community Pots

Five Years

The Final Product — A Beautiful Cattleya Orchid

# HORTICULTURE

## N. A. C. GRADUATE APPLIES SCIENCE TO FARMING AND DEMONSTRATES RESULTS IN EXPERIMENTAL ORCHARD BLOCK

By Joshua Feldstein

HORTICULTURE plays a profound and important role in our College program. It embraces not only the educational phase but the productional as well.

Horticulture should be considered as an art and a science. It engulfs the production and research of fruit trees, small fruits and vegetables. It is needless to mention the importance of these crops in the economy of the U.S. and the entire world.

We at the College differentiate two terms: Pomology—deals with the production of small fruits and tree fruits, Olericulture deals with the production of vegetable crops. In the broad sense of the word—Landscaping and floriculture are an integral part of Horticulture. In our own College this phase is an independent department.

For the proper instruction of Pomology our College maintains 15 acres of peach trees, 25 acres of apple trees, 3 acres of plums, cherries and pears and 3 acres of small fruits.

The varieties of fruits are the recommended ones for the Eastern part of the U.S.

There are approximately 30 different varieties of apples and peaches to enable our students not only to recognize them by appearance but to observe their habit of growth and to study their nutritional and cultural requirements.

We should be proud of our orchards that are being constantly improved to meet up-to-date standards.

The vegetable phase of Horticulture consists of 15 acres.

The crops grown are asparagus, rhubarb, tomatoes, cabbage, lettuce, beans and corn etc. These crops are consumed by our own commissary department.

In order to maintain the field facilities for best educational instruction—we have modern machinery consisting of sprayers, tractors, trucks, mowers, discs and various other implements.

This year we have been fortunate to install a modern cold storage room that will permit us to hold our fruits and vegetables for better disposal.

A modern grader and brusher were acquired to facilitate our grading and sorting of fruits.

All these facilities will be used in our applied agricultural program and in the various Horticultural Laboratory exercises.

The administration of our College has demonstrated repeatedly its keen interest in the advancement of our Horticultural department and through its efforts the department is progressing constantly.

The Cannery is an integral part of the Horticultural Department. The various fruits and vegetables canned are consumed by our own kitchen.

One of our 8-year-old peach orchards is being used in cooperation with the Department of Horticulture

Growth on an un-irrigated peach tree.

# AT N. A. C.

of Rutgers University, as an experimental orchard.

The orchard has been divided into 6 blocks consisting of 12 trees per block. Six trees in each block have been irrigated and six have not. The main purpose of this reasearch problem is to study the effects of irrigation on peach trees in the Eastern part of the U. S. In our research we are compiling data on the effects of irrigation on trunk growth, fruit size, color, total yield, date of harvest, shoot growth, flower bud formation and bud hardiness. Many incidental measurements are maintained, especially rainfall and temperature.

Basins were built around the trees and plaster of Paris Briquettes were buried at three different levels representing the three horizons of the soil profile. A special instrument called the Bouyoucos Moisture Meter is connected to the leads of the Briquettes to determine the electrical conductivity and thus the percentage of available soil moisture. Whenever the soil moisture reached a predetermined low level, irrigation was applied to saturate the soil to its field capacity.

This season we experienced a severe drought during June and July and an abundance of moisture in the wake of the hurricanes in August. The experimental orchard has been irrigated 3 times.

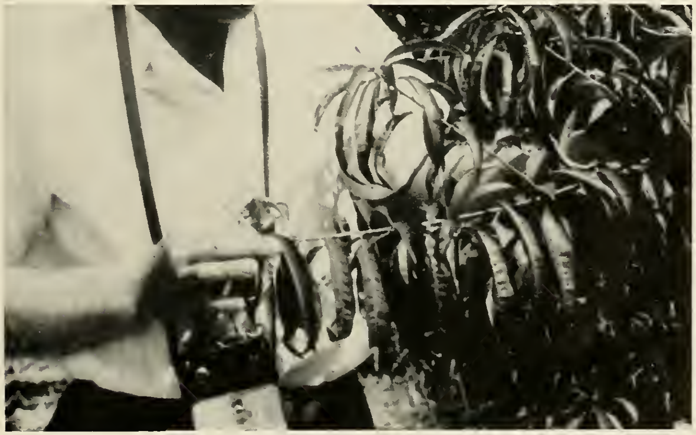
Observations were made and recorded throughout the season on the effects of supplemental irrigation on the foliage of the trees. Harvest data is maintained and after the completion of this season's work, the overall data will be analyzed statistically to determine significant results.

Field research of this type requires replications to counteract the effects of soil differences, pH, location, elevation micro and macro elements and their interactions.

For best and most accurate results such research should be conducted for several years to determine the seasonal variations as well.

It is too early, at the present time, to make statements as to the results of our work, but it looks very promising.

An attempt has been made to discuss briefly some of the work performed by the Horticultural Department at N.A.C. Since all of our students are requested to take the principles of Horticulture course they familiarize themselves with the entire Horticultural Department. Our 30 Horticultural Majors have an excellen opportunity to acquire a scientific and practical education. We hope each and every one of our students, regardless of his major interest or ambition in life, will take advantage of the opportunities offered at our College to enrich his own knowledge for the benefit of himself and mankind.



Growth on an irrigated peach tree. Notice that the twig is thicker and longer and has a shoot.

## POET'S CORNER

### HAD

To want and not to have is normal,

To have and not to want is awful,

To love and be loved is wonderful,

To love and not be loved is painful,

To embrace the one you love is ecstasy,

To embrace those we merely court is
motion without emotion.

### *IN EARLY SPRING . . .*

In early spring when the roses are few,
and sparkle with the morning dew,
as the bright jewels of the Khan,
all the universe is bright with the
thought of you.

When summer is on the land and sun
and warmth abound
and gayly the butterflies swarm
around
in a lively confusion of color
all the universe is filled with the
warmth of you.

Autumn brings her flash of color,
crisp mornings,
cool crimson evenings, and majestic
dawnings
as a tonic to my blood,
all the universe is filled with the
life and
joy of you.

Then, suddenly, as a flash of light, it is
winter.
All that was beautiful is dead and
cold and left
for nature to inter;
The gray clouds are mirrored in
my soul, for you are gone.
But the memory of you, as with the
memory of the seasons
recalls the brightness, life, and
warmth of you.

—D. E. L.

A large melon field is dusted with an insecticide from the air.

# FLYING FARMERS

IT SEEMS AS though time takes care of everything. Agricultural aviation has been born—for the most part. of reconverted surplus World War II trainers. As always, time has taken its toll of these old aircraft, and from them a new industry has now found a new life.

Two new experimental agricultural planes have been designed and built. The first of these, the "AG-1," has been built at Texas A & M College for the Civil Aeronautics Administration; the second plane, which was flown in February, is called the "Ohio Project." The reasearch on these aircraft has been a cooperative affair, with Federal, State, private, and industrial agencies pooling their knowledge of the subject.

The basic design around which these planes were built is in complete reversal of today's aviation trend toward high speed and high altitudes. An agricultural aircraft needs to travel at slow speeds and low altitudes, climb from and land on small airstrips, as well as possess a high degree of maneuverability. These planes are designed to fulfill many jobs, such as dispersing seed, pelleted fertilizers, spray and dust insecticides, because spraying of chemicals for only a short season would make the operation too costly.

Aside from the many jobs these planes have been designed to perform, pilot safety was also held up for scrutiny. Beside protective breathing apparatus, non-flammable fluids for hydraulic drives are being tested. Proof of the many safety devices that have been incorporated is the fact that when the AG-1 crashed in 1953, the pilot walked away from the wreckage.

What do farmers think of all this? Well, many flying farmers in the midwest just couldn't get along without their planes, which include almost anything with wings. Some fly standard small craft, such as the Piper PA-18-A, others own Army surplus planes. In an article, reprinted from Mechanix Illustrated, Chester Whitehorn states that five years ago flying farmers were a rarity. Today there are 20,000 flying farmers in the United States. The National Flying Farmers Association has more than 5000 members and its number is increasing every day.

These folks nearly run their farms from their planes. In fact, they travel hundreds of miles to buy cattle or machinery parts in other states in just a few hours. These same trips would have been very costly both in time, and in crops, a few short years ago. Other time-saving jobs these people are doing by air, are checking range fences, locating stray cattle, fertilizing, seeding, and so as not to be outdone, some of the younger folks are now doing their courting via the airways.

Let's take a look at the Piper Cub PA-18-A and see what makes this Duster—Sprayer so popular that its now being used in 34 countries.

*Performance:*

| | |
|---|---|
| Top Speed | 110 mph |
| Cruising Speed | 95 - 75% power |
| Stalling Speed | 45 mph |
| Take off run | 325 ft. |
| Take off over 50′ barrier | 950 ft. |
| Landing Roll | 410 ft. |
| Landing distance over 50′ barrier | 875 ft. |
| Best Rate of Climb Speed | 75 mph |
| Rate of Climb | 680 ft./min. |
| Best Angle of Climb Speed | 65 mph |
| Service Ceiling | 13800 ft. |
| Absolute Ceiling | 16100 ft. |
| Fuel Consumption | 7.7 gal./hr. (75% power) |
| Cruising Range | 440 (75% power) |

*Specifications:*

| | |
|---|---|
| Engine | Lycoming (4 cylinder) |
| H. P. | 135 |
| Gross Wt. | 2070 lbs. |
| Empty Wt. | 1020 lbs. |
| Useful Load | 1050 lbs. |
| Wing Space | 35.3 ft. |
| Length | 22.4 ft. |
| Height | 6.7 ft. |
| Baggage Cap. | 50.0 |
| Fuel Cap. | 36 gal. |

As a duster this plane lays down an even swath of more than 50 ft., and as sprayer the PA-18-A can disperse 15 gallons per acre with a 33-foot swath or 10 gallons per acre with a 50-foot swath.

Those of you who have done ground spraying or dusting I'm sure will agree with me that ground spraying of certain crops is definitely on its way out.

+ \+ \+

## ORCHIDS

*(continued from page 11)*

accomplished by the use of a "Hose Boy". This machine is nothing more than a hose wound on a motor driven reel. At the end of the hose is an irrigation sprinkler, that stands approximately three feet from the floor. When a bed needs watering, the reel is placed at the end of the bed that is to be watered. The hose is unwound until it reaches the other end of the bed; the motor turned on, and irrigation has begun. The reel slowly re-winds the hose, thus pulling the sprinkler down the aisle. The biggest advantage of this type of irrigation is labor saving, while a disadvantage is the fact that since one section of a bed may dry out sooner than another section, and the bed is equally watered, dry spots occur.

By the use of compressed air, you are able to pack the osmunda fiber very tightly around the roots and edges of the pots. Not only is it a great labor saving device, but also avoids root injury by hard tamping.

I hope this article has familiarized you with the latest greenhouse developments, and we certainly know that L.A. Fetzer is a grower with his eye on the future.

# HOW IT ALL STARTED

IT WAS QUIET—there was little light—it was that time of day when there *was* little light. The only noises to be heard were those of men returning from a night on the town.

Quietly, and with smiling faces, they came out of the East—out of the light. One first, and then another, and then another close behind—finally they were all there; all of them, and all ready for action.

They struck! Pow! With smiling faces they hit and hit again! Pow! They struck at the prostrate form that lay sleeping in its berth. It moved slowly, turning slowly, never really coming to life. What, after all, could it do?

The smaller types were in action immediately – fighting back with everything, and doing nothing against the overwhelming odds. For every blow offered, two were returned, – two hits, because they had the advantage of preparation.

Slowly the big hulk turned, and moved—not even attempting to dodge the crushing blows from above – the blows from the sneak air attack. Taking it all in—being hurt to the heart—absorbing the attack.

Finding no more resistance, they moved back into the light; back to the West from whence they had come; back to prepare once again.

There were casualties; mostly among the ones who fought back, as would be expected. There had been no formal Declaration of War – no warning—but both sides knew what this would mean—it meant sleepless nights, and broken homes, and, in all, much discomfort. What is done, is done –

A plan was formulated—"the best defense is a good offense." Offend we would! They knew we were coming—but they were not prepared for us at such an early stage. We, too, struck with an air attack that covered the homeland with destruction. We remembered what they had done to us—we remembered and acted—we flexed our muscles and acted—and destroyed.

Revenge is a sweet drink, but leaves a sour after-taste.

We won the first, and what happened? Out of the ruins grew another attack, even more fruitful than the first. We were caught with our pants down, again. Caught in bed, helpless, once again.

All we could do now is clean up; and make new plans. Where will this stop? How will it stop?

All things, good or bad, *do* end. This will, too. It will end when all the feathers are swept up; I've had enough of a pillow fight to last some years.

+ + +

## PACKAGING

*(continued from page 10)*

Packaging is a comparatively new industry striving to sell itself to the public. In the field of Ornamental Horticulture, new and more efficient packages are quickly finding a buyers market because each one is tailor made to fulfill a specific duty. Each package is designed to bring a more vigorous plant to the hands of the consumer. Because the packaging industry is doing such a fine job, more people are induced to try out their green thumb.

**W. J. Nyce's Shoe Store**

**"The Home of Nice Footwear"**

X-ray Fittings

West and State Streets

Doylestown, Pa.

**Stotz and Thiele**

**ANTIQUES**

Route 202

Buckingham, Pa.

**HUSTLE INN**

300 So. Main St.

Doylestown, Pa.

**Histand Brothers**

**Roofing Contractors**

DOYLESTOWN 4121

"The Best

at

Its Best"

**ED'S**

**DINER**

Franklin and State Streets

DOYLESTOWN

# GEORGE WASHINGTON And N. A. C.

## . . . A Brief Account of the Colorful History of Our Beautiful Campus

BUCKS COUNTY and surrounding counties are the scene of some of the most important historical events that took place in American History. With every happening have evolved countless stories. Our 1000 acres, being no exception, have many interesting facts concerning its growth. In fact, our land is part of William Penn's famed "Walking Purchase" from the Indians in 1673. By this purchase, Penn was able to have as much land as could be walked over in three days. This land was then paid for in wampum, blankets, kettles, beads, fish hooks, etc.

The great Chief Tammany, from whom Tammany Hall took its name, was one of the signers of this purchase. His body is buried at the foot of Prospect Hill, a mile from the College.

Dr. Joseph Krauskopf, founder of the school, searched some time before he finally purchased the Watson farm of the one hundred and twenty-two acres, which was the original school farm. This land was really the second choice of Dr. Krauskopf. His first choice was a piece of land located on the Pennsylvania Railroad line to New York. Although desirable, it was too expensive. The original price of the Watson farm, paid by Dr. Krauskopf, was ten thousand dollars.

The buildings on the farm were few and numbered. The central location was called "The Home Place". This house still stands today, and houses Dean Meyer and his family. The pre-revolutionary house has one of the most beautiful fireplaces ever built. With the introduction of the coal furnace, this masterpiece was boarded up, and was recently discovered. There are also two small panes of glass in one of the thick outerdoors of the house which, tradition says, were used to keep watch on the enemy during the Revolution when the house was in state of siege.

Of the ten farm houses acquired by the College, six are pre-Revolutionary. We can go back 204 years to the construction of the building used as the research laboratory.

This house was built by an Englishman as an Inn, and was known as the Wayside Inn for almost one hundred and fifty years. The property then changed hands, and the house was known as Stevens Tavern for many years.

In Colonial days, this house served as a stage coach stop for passengers traveling from New York to Philadelphia. After the College purchased this building, it was used as a dormitory to house some of our students, and the sign "Zionist's Hall" hung over its door for several years.

Except for the removal of the partition between the bar room and the lobby, making a great living room

Upper left: This beautiful home of Dean Meyer, was in state of siege during the English Revolution. Upper right: The pre-revolutionary "Wayside Inn" served as a stagecoach stop for passengers traveling from Philadelphia to New York. This building is now being used as a research laboratory for the college.

One of the most beautiful fireplaces ever built can be seen in the home of Dean Meyer.

with a beautiful fire place at one end, the old Inn stood unchanged until recently, with its huge kitchen, small gambling room off the lobby; a huge room which was the Inn keeper's living quarters; the ball room above; and a huge attic, which served as a voting place and township meeting place for the townsfolk of New Britain.

Soon after the Revolution, the government tried to raise taxes, and one method was that of taxing houses. It was called the "Window Tax", as the houses were taxed according to the number of windows they contained. There was an insurrection against the tax, led by the owner of the Inn. It really isn't hard to sympathize with the tavern keeper since the Inn had no less than 45 windows.

Military parades often took place in the Inn yard. As a penalty for not attending a drill, the owner of the Inn, Jacob Fries, was fined a grinding stone, a spinning wheel, a chest, and a cow.

When Washington's army broke camp at Valley Forge, one detachment passed through the College fields, and stopped at the Wayside Inn to rest.

With the addition of Farm number three, the College acquired a farm house 226 years old with a great deal of historic value. This house, in which Mr. & Mrs. Feldstein live, was built by an Englishman, Robert Shewell, who called it "Painswick Hall" after the house he had lived in while in England. So famous was this house in the 150 years that it remained in the Shewell family, that a letter simply addressed to "Painswick Hall" would reach its owner safely.

The Shewells were people of education and means for those days. Robert Shewell, as Justice of the Peace, presided at many weddings. It was quite the thing to be married by the "Squire of the Hall". They were friends of the Indians, and many bitter winter nights found the braves sleeping in front of the huge kitchen fire place. In return, a lot of fine venison found its way to the Shewell table.

In the more than two hundred and twenty-five years of its existence the ownership of the house has changed but five times.

The stories of Benjamin Franklin, who helped plan and execute an elopement from Painswick Hall, and the courting of a girl by Gen. U.S. Grant during the Civil War, are told over and over again about this house.

With the proceeds of the second lecture tour, Dr. Krauskopf provided $10,000 which was used to build Pioneer Hall. It was not just Pioneer Hall, but the entire school. This building contained class rooms, library, dining room, kitchen, gymnasium, laundry, dormitory, and offices and headquarters for the dean.

A short time after Pioneer Hall was built, it caught fire, and burned to the ground. This building, similar in construction to Lasker Hall, stood where the library now stands.

The Expansion Period of the school began in 1916. Early in that year, the Morris Lasker family contributed $92,000 for the construction of a building in his name. Lasker Hall was used as a focal point for the general development of the layout of the campus, and its style of architecture as a guide for buildings to come. All of the buildings on our campus today, with the exception of Elson Hall, were built in a period of twelve years. Approximately $525,000 was spent carrying out this expansion period.

It might be interesting to note that at the founding of the school, it was meant to be co-educational. The funds of the school at that time were insufficient to quite afford it, although the idea has never been abandoned.

The last farm that the school acquired was donated by the Alumni Association in 1930. It was a twenty-six acre farm facing U.S. Route 202. The College had desired to obtain this farm for many years as it separated the main campus from an outlying farm.

Many other interesting facts concerning the College can be obtained from the Bucks County Historical Society and many other libraries including our own.

# HIJACKED HUMOR

Marriage is an institution.

Marriage is love.

Love is blind.

Therefore marriage is an institution for the blind.

* * *

"Did you read about the young television actress who was just named Miss Soft Drink of 1955? She'll go out with anybody from 7-up."

* * *

Three salesmen were sitting in a tavern having a few rounds of beer. "I hate to see a woman drink alone," said the liquor salesman. The wholesale grocery salesman added, "I hate to see a woman eat alone." The mattress salesman remained silent like a gentleman.

* * *

Teacher—"Every day we breathe oxygen. What do we breathe at night?"

Willie—"Nitrogen."

* * *

Question: "What's the most useless thing in the world?"

Answer: "Telling hair-raising stories to bald-headed men."

* * *

"How did you get that black eye?" "I went to a night club and was struck by the beauty of the place."

* * *

She: "I'd like to share your troubles."

He: "But I have no troubles."

She: "I mean after we're married."

* * *

Husband: (reading newspaper) "3,-126 elephants were needed to make billiard balls last year."

Wife: "Isn't it wonderful that such great beasts can be taught to do such delicate work!"

* * *

"What is the difference between a model woman and a woman model?"

"One is a rare possibility—the other a naked fact."

Prof.: "Didn't I get my last haircut in this shop?"

Barber: "I think not, sir. We've only been in business for a year."

* * *

She: "That husband of mine is a worm."

Friend. "Yes, I just saw a chick pick him up."

* * *

A man's suit would cost $795.63 if he paid per-ounce what a woman's bathing suit costs.

* * *

N.A.C. student to beautiful girl: "If I told you that you had a gorgeous figure would you hold it against me?"

* * *

Nothing makes a woman look better than 3 cocktails in a man.

* * *

Professor to student: "Would you like to see a model home?"

Student: "Glad to, what time does she get done work?"

* * *

A young school teacher announced her engagement. Other faculty members and pupils offered her good wishes and happiness. From one young pupil she received a note which read:

Dear Miss Bostock;

I hope you have a happy and sex-full married life.

Your pupil,

Betty

* * *

"What's a Grecian urn, daddy?" "I don't know, son. Guess it depends on what he does."

* * *

She: "I'm getting so thin you can feel my ribs."

He: "Gee, thanks."

Junior: "What does 'college bred' mean, pop?"

Father: "College bread is a four-year loaf made by a youth from the old man's dough."

* * *

Sally: "I'm so discouraged; everything I do seems to be wrong."

Irv: "What are you doing tonight?"

* * *

Mother, putting junior to bed: "Shh—the sandman is coming."

Junior: "Fifty cents and I won't tell Daddy."

* * *

Prof. (irritated): If there are any morons in the room, please stand up.

A long pause and a lone freshman arose.

Prof.: Well, do you consider yourself a moron?

Freshman: No, sir, but I hated to see you stand by yourself.

* * *

She: "How did you find the men at the party?"

Her: "I just opened the door marked 'MEN' and there they were."

* * *

Mother: "I'll teach you to kiss my daughter!"

Youth: "Too late, I've learned already."

* * *

House Mother: "Why didn't you scrape the mud off your shoes when you came in?"

Animal Husbandry Student: "What shoes?"

* * *

He: "Give me a kiss like a good girl."

She: "Wouldn't you like the other kind?"

* * *

Man (in auditorium): "I've lost my wallet with $500 in it and I'll give a $50 reward to whoever finds and returns it."

Voice in rear: "I'll give $100."

# Notes and News

HERE'S THE LATEST on the new freshmen class. Approximately one hundred freshmen students arrived on the N.A.C. campus on September 27th to begin the orientation session. Fifteen of these freshmen are veterans, while three are foreign students, who are Bernabe Buenavertura of 1515 Juan Luna, Manila, Philippines, David Jung, who was born in China, but at present is living in Merchantville, N. J., and Chan Ho Lee from Seoul, Korea. Forty of our freshmen hail from Pennsylvania, while thirty are from New Jersey, and thirteen are from New York. Students from miscellaneous states make up the rest of our freshmen enrollment.

Congratulations to Mr. and Mrs. Joshua Feldstein, on the arrival of their son, Theodore Lee, on August 7th. Mrs. Feldstein, the dean's former secretary, and Mr. Feldstein, an instructor at the college have already sent their son's entrance application to the college. Theodore will be a member of the class of 1977—naturally, a Horticultural major.

We welcome Miss Gaile Clarke to the National Agricultural College. Miss Clarke, from Furlong, Pa., is the dean's new secretary. Before joining us, she was employed by a Doylestown attorney. The dean's secretary since May, Miss Clarke enjoys working with the students, and thinks that everything about her job is wonderful.

Collegeville, Pa., was the scene of the wedding of Mr. and Mrs. Roy Varner on August 24th. Roy is a senior animal husbandry major at N.A.C. The former Mrs. Varner, Peggy Moore, attended Beaver College in Jenkintown, Pa. N.A.C. was well represented at the wedding with Ron Stammel and Kirk Arnold as ushers, and the groom's brother, Bob Varner as best man.

Congratulations to Clinton R. Blackmon, who recently received his degree of Doctor of Philosophy from Rutgers University. Dr. Blackmon is the head of the agronomy department at N.A.C.

### VARSITY FOOTBALL 1955

| | | |
|---|---|---|
| *Sept. 17 | Haverford College at Farm School, Pa. | 2:00 P.M. |
| Sept. 24 | Kutztown State Teachers College at Kutztown, Pa. | 2:00 P.M. |
| Sept. 30 | Montclair State Teachers College at Montclair, N.J. | 8:00 P.M. |
| Oct. 8 | Brooklyn College at Brooklyn, N.Y. | 2:00 P.M. |
| Oct. 15 | Susquehanna University at Farm School, Pa. (Homecoming Day) | 2:00 P.M. |
| Oct. 22 | Millersville State Teachers College at Millersville, Pa. | 2:00 P.M. |
| Oct. 29 | Wilson Teachers College at Farm School, Pa. | 2:00 P.M. |
| Nov. 5 | Gallaudet College at Farm School, Pa. | 2:00 P.M. |
| Nov. 12 | Long Island Agricultural & Technical Institute at Farm School, Pa. | 1:30 P.M. |

*Pre-season Scrimmage Game

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## EXOTIC AROIDS

*(continued from page 9)*

colored flora which belong to the Araceae family. The members of this group, like many of the other ornamental foliage plants, can only be distinguished by their flowers. Examples of this can readily be seen in the Philodendron genus alone.

One of our earliest floras of the moist woodlands, the skunkcabbage *(Symplocarpus foetidus)* and the Jack-in-the-pulpit *(Arisaema triphyllum)*, are also members of the Arum family. The Calla Lily, is not a true lily, but an aroid.

The distinguishing feature of the aroid is its spath and the spadix for which the Anthurium is so famous. This member grows best in a rich soil or osmunda fiber, with a moist atmosphere and considerable light. The English translation of Anthurium is "Tail-flower," in reference to the slender, elongated infloresence of the many species.

To hide the osmunda fiber, other aroids placed around the elongated stem and aerial roots of the Anthurium may be used. *Scindapsus aureus* is an excellent plant for this use. *Scindapsus,* a Greek name of an ivy-like plant, and *aureus,* meaning golden, is native of the Solomon Islands. It has a tall furrowed stem, which is branched with long internodes. The leaves are medium green above, and marked in varying degrees with yellow spots. Propagating this plant asexually, it should be remembered that if a cutting is taken from the green side of the stem, with a green node and leaf, the final product will be green and not varigated. Another interesting factor about this plant is that the varigated side of the blade is much smaller in size compared to the more solidly green half of the leaf.

The profusely decorated and colorfully molded leaf of Calladiums which is a native of Java, is one of the older aroid curiosities. Aside from becoming familiar with the names of the various foliage plants, one must also familiarize himself with a few of the trouble symptoms of the common houseplant.

The following seven points may aid you in diagnosing some of the common "hunger" signs and other undesirable symptoms:

1. Brown tips or burned margins of leaves—too much fertilizer, wind burn, cold injury.

2. Yellowing and dropping of leaves—gas fumes, chilling, overwatering, poor drainage, poor aeration.

3. Small leaves—light or heavy soil mixture, lack of fertility, too dry.

4. Weak growth—high light intensity, lack of fertilizer, root rot.

5. Wilting of soft growth—too much heat, root injury.

6. Small leaves with long internodes—little light, high temperatures.

If the reader would like to secure more information about these cultivated aroids, one of the best books is, "Cultivated Aroids," by M. R. Birdsey. This book offers more than 70 illustrations and complete descriptions, which help in identifying many of the common house plants.

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